

A comparison of microbial contact bioassay with conventional elutriate assays for evaluation of wastes hazard

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Abstract

The aim of this investigation was to develop a battery of bioassays - contact and elutriate tests with *Bacillus pumilus*, elutriate tests with *Daphnia magna* and *Paramecium caudatum*, for the assessment of the wastes' toxicity. The contact test with *B. pumilus* was more sensitive than the elutriate test. The estimated LID10 were much higher for *Daphnia* and *Bacillus* tests than for *Paramecium* test. No correlation was determined between the data files of bioassays and of the chemical analysis of the waste. The procedure for classifying the wastes into the hazard classes by calculating LID10 in the *Bacillus* test was proposed. Copyright © 2010 Inderscience Enterprises Ltd.

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Keywords

Bacillus pumilus, Bioassay, *Daphnia magna*, Industrial wastes, *Paramecium caudatum*